A
PLAN
OF A COURSE OF
CHEMICAL LECTURES,

BY
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K
AND
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IN THE
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> *Rerum natura, ſacra ſua non ſimul tradit: Initiatos nos credimus, in veſtibulo ejus hæremus. Illa Arcana non promiſcuè nec omnibus patent; reducta et in inferiore ſacrario clauſa ſunt. Ex quibus aliud hæc ætas, aliud quæ poſt nos ſubibit, adſpiciet.*

CAMBRIDGE,
Printed by J. Archdeacon Printer to the UNIVERSITY.
M.DCC.LXXI.

BRITISH MUSEUM

TO
THE MOST NOBLE
CHARLES WATSON WENTWORTH
MARQUIS OF ROCKINGHAM,
&c. &c. &c.

AS
A SINCERE TESTIMONY OF
RESPECT AND GRATITUDE
FOR THE STIPEND, WHICH THE AUTHOR,
THROUGH
HIS LORDSHIP's RECOMMENDATION,
ENJOYED FROM THE CROWN AS
PROFESSOR OF CHEMISTRY
IN THE UNIVERSITY OF CAMBRIDGE,

THE
FOLLOWING PLAN OF CHEMICAL LECTURES

IS
MOST HUMBLY INSCRIBED AND DEDICATED
BY
HIS LORDSHIP's
MUCH OBLIGED AND OBEDIENT SERVANT,

RICHARD WATSON.

BRITISH MUSEUM

INTRODUCTION.

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The Solution of Mercury in Acid of Nitre cryſtallized.

The ſame inſpiſſated - Calx Mercurii.

The inſpiſſated Maſs, or cryſtallized Salt, calcined to a red Colour - Mercurius præcipitatus ruber.

Mercurius præcipitatus ruber dulcified by Spirit of Wine - Mercurius corallinus - Arcanum corallinum.

Mercury precipitated from its Solution in Acid of Nitre by Copper.

Mercury corroded into a ſaline Maſs by Oil of Vitriol.

The preceding ſaline Maſs partly diſſolved, principally changed into an inſipid, indiſſoluble, yellow Powder, by frequent Ablution in warm Water - Mercurius emeticus flavus - Mercurii Præcipitatum flavum - Turpethum minerale.

Mercury precipitated, from the Waſhings of Turpeth mineral, by Alcalies.

Waſhings of Turpeth mineral inſpiſſated, and deliquiated - Oleum Mercurii.

Mercury united by Sublimation with the Acid of Sea Salt; Corroſive Sublimate made from a Mixture of unwaſhed Turpeth mineral and Sea Salt.

Corroſive Sublimate made from Cryſtals of Mercury in the nitrous Acid and Sea Salt.

Corroſive Sublimate made from crude Mercury, Nitre, calcined Vitriol, and Sea Salt.

Corroſive Sublimate rendered mild and inſipid, by Trituration with a ſufficient Quantity of crude Mercury and ſubſequent Sublimations - Mercurius dulcis ſublimatus - Calomelas - Aquila alba - Panacæa mercurialis - Draco mitigatus, &c.

Specific Gravities of corroſive Sublimate and Calomel, determined.

Corroſive Sublimate diſſolved in Water, and cryſtallized.

Corroſive Sublimate diſſolved in Spirits of Wine.

Mercury precipitated from a Solution of corroſive Sublimate in Water by fixed Alcalies - Mercurius præcipitatus fuſcus - by vo-

volatile Alcali - Mercurius præcipitatus dulcis - by Lime Water - Aqua Phagedenica.

Mercury precipitated from its Solution in Acid of Nitre by the Acid of Sea Salt, or by any neutral Salt containing the Acid of Sea Salt - Mercurius præcipitatus albus.

Mercury precipitated from its Solution in Acid of Nitre by the Acid of Vitriol, or any neutral Salt containing the Acid of Vitriol - Turpeth mineral.

Mercury diſſolved in the vegetable Acids, native, and fermented, and in fixed, and volatile Alcalies, after Marggraf's Method.

Account of M. le Comte de la Garaye's Tincture of Mercury in Spirits of Wine.

Mercury united with Sulphur by Trituration, and by Fuſion - Æthiops Mineral.

A Mixture of Sulphur and Mercury ſublimed - Factitious Cinnabar.

Factitious Cinnabar levigated - Vermillion.

Method of diſcovering whether Vermillion be adulterated with red Lead.

Mercury revivified by diſtilling Cinnabar with Iron-filings.

Mercury united with volatile Tincture of Sulphur, and with Hepar ſulphuris.

OF SEMIMETALS.

Of Antimony, and Regulus of Antimony.

Natural Hiſtory of Antimony, and other Ores of Regulus of Antimony.

Crude Antimony ſeparated from earthy and ſtony Impurities by Eliquation, or Diſtillation per Deſcenſum - Morſuli reſtaurantes Kunckelii.

Crude Antimony digeſted with Aqua regia, Solution of the metallic, and Separation of the ſulphureous Part effected thereby.

Crude Antimony calcined to an aſh-coloured Calx.

Calcined Antimony vitrified.

Glaſs of Antimony digeſted with Aqua regia, Sulphur ſometimes ſeparated thereby - Differences obſervable in the fuſibility, colour, pellucidity, and ſolubility of Glaſs of Antimony in Wines, and other Menſtruums, according to the different Degrees of Calcination uſed in preparing it.

Regulus of Antimony prepared, by fuſing the Calx, or Glaſs of Antimony with Charcoal, Soap, or other phlogiſtic Matters.

Regulus of Antimony prepared, by fuſing crude Antimony with Iron, with Lead, with Copper, &c.

Regulus of Antimony prepared, by fuſing crude Antimony with Tartar and Nitre.

Chief mechanic Uſes of Regulus of Antimony noticed.

Regulus of Antimony volatilized by a ſtrong Fire - Flowers of Regulus of Antimony.

Method of reducing Flowers of Regulus of Antimony.

Action of Acids upon Regulus of Antimony, examined.

Regulus of Antimony combined with the marine Acid by diſtilling Antimony and corroſive Sublimate together - Cauſticum Antimoniale, or Butter of Antimony.

Regulus of Antimony precipitated from the marine Acid, by diluting Butter of Antimony with Water - Pulvis Algaroth - Mercurius vitæ.

Regulus of Antimony precipitated from the Water uſed in the preceding Proceſs, commonly called Spiritus vitrioli philoſophicus by an Alcali.

Bezoard Mineral prepared, by repeated Abſtractions of the Acid of Nitre from Butter of Antimony - Spiritus Bezoardicus.

Antimony and Nitre mixed together in the Proportion of 2 to 1, and deflagrated - Crocus Antimonii mitior.

Antimony and Nitre mixed together in equal Parts, and deflagrated - Crocus Antimotimonii - Hepar Antimonii - edulcorated, Crocus metallorum.

Antimony and Nitre mixed together in the Proportion of 1 to 2, deflagrated and edulcorated - Emeticum mite Antimonii.

Antimony and Nitre mixed together in the Proportion of 1 to 3, deflagrated and edulcorated - Calx Antimonii - Antimonium diaphoreticum dulce.

Different chemical Properties of the preceding, and other ſimilar Combinations of Nitre and Antimony, explained; general Account of their medical Powers deduced therefrom.

Waſhings of Diaphoretic Antimony conſidered - Materia perlata, or Boerhaave's Sulphur fixatum ſtibii precipitated therefrom.

Regulus of Antimony reduced to a Calx, ſimilar to Diaphoretic Antimony, by Deflagration with Nitre, called Ceruſſe of Antimony.

Antimony combined with fixed Alcali by boiling them together - Kermes Mineral ſpontaneouſly precipitated from the Solution.

Tinctura Antimonii made by digeſting Hepar Antimonii in Spirits of Wine.

Vinum Antimoniale ſive Emeticum, made by digeſting Crocus Antimonii, or Glaſs of Antimony in Mountain Wine.

Tartarus emeticus made by boiling Glaſs, or Crocus of Antimony with Cream of Tartar.

Tartarus emeticus made, after Macquer's Manner, by combining Pulvis Algaroth and Cream of Tartar.

Of the medical Virtues of Antimonial preparations in general, and the Cauſe of the variable and uncertain Effects of particular Preparations explained.

Of Zaffre and Regulus of Cobalt.

Method of making Zaffre in Saxony.

The Zaffre of the Shops diſſolved in all the mineral Acids.

The Difference of the Colour of the Solution of Zaffre in weak and ſtrong Acid of Sea Salt obſerved.

The tawny Colour of Zaffre diſſolved in weak Spirit of Salt, changed into a green by heating the Solution.

Zaffre changed into a blue Glaſs by Vitrification, called Smalt.

Method of preparing from the blue Glaſs of Zaffre, an impalpable Powder, called in that State azure, enamel blue, Powder blue.

Of Lapis Lazuli, and the pigment called Ultramarine blue prepared therefrom, and its Difference from the azure prepared from Zaffre.

Regulus of Cobalt procured from Zaffre or Smalts, when melted in Conjunction with Matters containing Phlogiſton.

General Properties of Regulus of Cobalt enumerated.

Account of the manufacturing of Smalts in England.

Orpiment and Quicklime digeſted together with Water - Liquor vini probatorius.

Uſe of the preceding Liquor in detecting Adulterations of Wine by Saccharum Saturni, ſhewn from the different Colours of the Precipitates attending its Mixture with genuine and adulterated Wine.

Experiments with the aforeſaid Liquor as a ſympathetic Ink.

Of Nickel.

Nickel not ſoluble in Acid of Vitriol, with difficulty in Acid of Sea Salt, readily by Acid of Nitre into a green Colour.

Nickel precipitated from Acid of Nitre by a fixed Alcali into a greeniſh Powder.

Nickel compared with Regulus of Cobalt.

Experiments with ſympathetic Inks from Solutions of Nickel and Cobalt.

Of Biſmuth.

Natural Hiſtory of Biſmuth.

Biſmuth ſublimed into yellowiſh Flowers by a ſtrong Fire.

Biſmuth changed into an aſh-coloured Powder by Calcination.

Calx of Biſmuth vitrified.

Vitrified Calx of Biſmuth reduced by the Addition of Phlogiſton.

Biſmuth diſſolved in Acid of Nitre.

Solution of Biſmuth in Acid of Nitre cryſtallized.

Biſmuth precipitated from its Solution in Acid of Nitre by the Affuſion of Water, - Magiſtery of Biſmuth, - Blanc de fard.

Biſmuth precipitated from the Waſhings of the Magiſtery by a fixed Alcali.

Biſmuth and Mercury melted together - Amalgam.

Biſmuth, Lead, and Mercury, melted together - Method of falſifying Quickſilver - Method of detecting the Adulteration of Quickſilver.

Biſmuth not miſcible by Fuſion with Nickel.

Of Zinc.

Natural Hiſtory of Lapis Calaminaris, Black Jack, and other Ores of Zinc.

Zinc procured by diſtilling Lapis Calaminaris with Charcoal.

Account of the Method of making Engliſh Zinc at the Copper Works near Briſtol, and its difference from Indian Zinc ſhewn.

Zinc calcined in a gentle Fire, inflamed in a ſtrong Fire - Flowers of Zinc, or Lana Philoſophorum ſeparated during the Combuſtion of Zinc.

Flowers of Zinc vitrified.

Flowers of Zinc reduced in cloſe Veſſels.

Flowers of Zinc diſſolved in all the Acids.

Zinc deflagrated with Nitre.

Zinc diſſolved in Acid of Vitriol - Nature of the black Flocculi ſeparated during the Solution.

Solution of Zinc in Acid of Vitriol cryſtallized - white Vitriol.

Method of diſcovering whether white Vitriol contains Copper.

Difference between Engliſh and Goſlarian white Vitriol.

Zinc diſſolved in Acid of Nitre.

Solution of Zinc in Acid of Nitre cryſtallized.

Zinc diſſolved in the concentrated Acid of Sea Salt, and in the aqueous Acid of Vitriol - Inflammable Air ſeparated during the Solution in each Menſtruum.

The Quantity, and ſpecific Gravity of the inflammable Air ſeparated from Zinc by Solution, eſtimated by the Hon. Henry Cavendiſh.

Zinc not acted upon by Sulphur, or Liver of Sulphur - Purified thereby from all other metallic Subſtances.

Zinc not miſcible by Fuſion with Biſmuth.

OF METALS.

Of Lead.

Natural Hiſtory of Lead Ores.

Account of the two different Methods of extracting Lead from its Ore, as practiſed in Derbyſhire.

Lead extracted from its Ore - Method of aſſaying ſimple Lead Ores.

Lead in Fuſion partly volatilized, chiefly converted into a gray Calx, called Plumbum uſtum, or calcined Lead.

Plumbum uſtum melted in a ſtrong Fire - Litharge.

Account of the Method of making red Lead from Plumbum uſtum, as practiſed in Derbyſhire.

Account of the Method of making red Lead from Litharge, as practiſed in Flintſhire.

Remarks concerning the quantity, and cauſe of the Increaſe of Weight, gained by the Converſion of Lead into Minium.

Glaſſes of Lead made from Minium ſimple, and mixed with vitrifiable Earth in different Proportions.

Artificial Ores, perfectly reſembling ſome kinds of natural Ores of Lead, made from an Union of Lead and Sulphur.

Of black Lead or Wadd.

Method of diſtinguiſhing the factitious from the true black Lead.

Black Lead expoſed to a ſtrong Fire in cloſe Veſſels - Fixity remarked.

Black Lead expoſed to a ſtrong Fire in open Veſſels - Loſs of Weight remarked.

Calcined black Lead attracted by the Magnet.

Lead corroded into a white Calx by the Vapour of Vinegar, called Ceruſſe or white Lead.

Account of the Method of Manufacturing white Lead at Holywell, and other

Places, and of the increaſe of Weight gained by the Lead.

White Lead, Minium, or Litharge, diſſolved in diſtilled Vinegar, and cryſtallized - Sugar of Lead.

Crude Lead, white Lead, Minium, or Litharge diſſolved in Oil of Olives - Common Diachylon Plaſter.

Method of diſcovering whether Oil of Olives be adulterated, by means of Lead, with Rapeſeed, or other expreſſed Oils.

Lead ſeparated, from its Solution in Oils, by Vinegar.

Lead diſſolved in Acid of Nitre, and cryſtallized.

Lead precipitated from Acid of Nitre by Acid of Vitriol, or any neutral Salt containing Acid of Vitriol; by Acid of Sea Salt, or any neutral Salt containing Acid of Sea Salt.

Lead diſtilled to Dryneſs with Oil of Vitriol - Sulphureous Acid - Sulphur - Saline Reſiduum.

Sulphur procured inſtantaneouſly by

pouring Oil of Vitriol upon Lead in Fuſion, and collecting the Vapour.

Lead or Minium diſtilled with Sal Ammoniac - Volatile Alcaline Spirit - Volatile Alcaline Salt - Reſiduum, or a Combination of the Acid of Sea Salt with Lead, called Plumbum corneum.

Plumbum corneum fuſed.

Plumbum corneum diſſolved in Water, and cryſtallized.

Lead and Mercury melted together in different Proportions - Amalgams of various Conſiſtencies.

Of Copper.

Natural Hiſtory of Copper.

Account of the Proceſſes uſed in extracting Copper from its Ore, at Ecton, Macclesfield, Cheadle, &c.

Regulus and Scoria of the firſt, ſecond, third, and fourth Fuſion of Copper Ore examined, and the Reaſon of their Differences explained.

Copper combined with Sulphur by Stratification and Cementation - Æs uſtum.

Copper combined with Sulphur by Fuſion - Artificial Ore of Copper.

Copper combined with Arſenic by Fuſion - white Copper.

Of Chineſe white Copper, improperly called Tutenag, and its Difference from the preceding white Copper ſhewn.

Copper changed into Braſs, by cementing and fuſing Copper in conjunction with calcined Calamine and Charcoal.

Copper changed into Braſs, by ſubſtituting, in the preceding Proceſs, calcined black Jack for Calamine.

Braſs changed into Copper, by diſſipating the Zinc or metallic Part of the Calamine, in a ſtrong Fire.

The Increaſe of Weight, gained by the Copper in being changed into Braſs, eſtimated.

Copper melted with Zinc - Pinchbeck.

Difference betwen Pinchbeck and Braſs obſerved, and the Reaſon explained.

Copper melted with Tin in various Proportions - Bell metal - Bronze, &c.

Equal Parts of Copper and Tin melted together, their mutual Penetration and Increaſe of ſpecific Gravity obſerved.

Copper diſſolved in Oil of Vitriol.

Solution of Copper in Oil of Vitriol cryſtallized - Blue Vitriol.

Copper precipitated from a Solution of blue Vitriol by Iron - Cuprum præcipitatum, called Ziment Copper.

Account of the Cement or Ziment Waters at Newſol in Hungary, Arklow in Ireland, in Angleſea, &c. and of the Methods of procuring Copper from them.

Copper diſſolved in Acid of Nitre, and cryſtallized.

Copper precipitated from Acid of Nitre by Chalk - Verditer Blue.

Copper diſſolved in Acid of Sea Salt, and cryſtallized.

Cryſtals of Copper, in the Acids of Sea Salt, and Nitre, when diſſolved in Spirits of

Wine, communicate a green Colour to the Flame.

Copper diſſolved in Oils, in vegetable Acids, in fixed, and volatile Alcalies, in neutral Salts, &c.

Account of the Method of making Verdigriſe at Montpellier, and in England.

Various mechanical Applications of Verdigriſe enumerated.

Verdigriſe diſſolved, in Part, in diſtilled Vinegar.

Solution of Verdigriſe in diſtilled Vinegar cryſtallized, improperly called Viride Æris diſtillatum.

Cryſtals of Verdigriſe diſtilled - Concentrated Acid of Vinegar, called Acetum Radicatum - Cupreous Reſiduum.

Acetum Radicatum mixed with rectified Spirits of Wine, and acetous Æther made after the Manner of M. le Comte de Lauragais.

Of Iron.

Natural Hiſtory of Iron.

Account of the Proceſſes uſed in extracting Iron from its Ores in different Parts of England and Wales; and of the Attempts to make Pig Iron by Coke and charred Peat.

Method of converting Pig Iron into Bar Iron.

Of the Tenacity of Iron Wire.

Iron converted into Steel.

Steel converted into Iron.

Steel hardened, and rendered brittle and elaſtic.

Of Tempering of Steel.

Iron deprived of its Phlogiſton by various Ways - Different kinds of Crocus Martis.

Natural Hiſtory of Ochres.

Red and yellow Ochres converted into Iron by the Addition of Phlogiſton.

Iron deprived of its Phlogiſton by Deflagration with Nitre.

Iron combined with Sulphur.

Iron diſſolved in Acid of Vitriol - Sal Martis.

Iron diſſolved in Acid of Sea Salt.

The inflammable Air ariſing from Iron during the two preceding Solutions collected and inflamed.

Of fulminating Damps in Mines.

Method of freeing the Coal-pits at Whitehaven from inflammable Air deſcribed.

Iron diſſolved in Acid of Nitre, elaſtic but not an inflammable Air produced thereby.

Hiſtory of the Diſcovery of the Method of making Pruſſian Blue.

Pruſſian Blue made by precipitating a Solution of green Vitriol with an Alcali ſaturated with Phlogiſton.

The colouring Matter of Pruſſian Blue extracted by an Alcali.

Iron precipitated from any of its acid Solvents into a blue Powder by a fixed Alcali, ſaturated with the colouring Matter of Pruſſian Blue.

Iron precipitated from any of its acid Solvents into a black Powder by a Decoction of Galls or other aſtringent Vegetables.

Nature of Ink and of the black Dye, and the Difference between them explained.

Beccher's Experimentum ferriferum conſidered.

Iron ſhewn to exiſt in common Sand, in coloured Clays, in the Aſhes of Vegetables, in the Aſhes obtained from the Blood, Urine, and Fleſh of Animals.

Vegetable Aſhes melted into a green or blue Glaſs, according to the Violence of the Fire.

Iron filings or Colcothar of Vitriol mixed with Sal Ammoniac and ſublimed - Flores Martiales - Reſiduum.

Reſiduum deliquiated - Lixivium Martis - Oleum Ferri.

Flowers of iron digeſted with Spirits of Wine - Tinctura Florum martialium.

Iron precipitated from its Solution in Acid of Nitre by fixed Alcali - Sthal's alcaline Tincture of Iron.

Iron combined with Cream of Tartar by grinding them together - Rotuli Martiales - Mars ſolubilis; by boiling, Tartarus Chalybeatus, Tinctura Styptica Helvetii.

Iron diſſolved in Rheniſh Wine - Vinum Chalybeatum.

Of Tin.

Natural Hiſtory of Tin.

Of the Proceſſes of ſtamping, buddling, and trunking uſed in Cornwall for preparing Tin Ore for Fuſion.

Of the Magnetiren uſed in ſome Parts of Germany.

Tin melted and granulated.

Tin rendered hard and ſonorous by being melted in Conjunction with Regulus of Antimony, with Zinc, with Biſmuth, &c.

Of Pewter and its different Kinds.

Of different metallic Mixtures which melting with leſs Heat than the Metals to which they are applied, conſtitute Solders of various Kinds.

Method of manufacturing Tin Plates in England and Germany, and of tinning Copper Veſſels.

Tin calcined ſingly and in Conjunction with Lead - Putty.

Calces of Lead and Tin melted with calcined Flints, or other vitrifiable Earths, and alcaline Salts, in various Proportions - white Enamels.

White Enamels converted into different Colours, by the Addition of metallic Calces, and applied upon Engliſh and Indian Porcelain.

Paſtes and artificial precious Stones made, and their Difference from coloured Enamels explained.

Tin amalgamated with Quickſilver, and the Amalgam mixed with Sulphur and Sal Ammoniac, and ſublimed - Reſiduum called Aurum moſaicum or muſicum.

Tin diſſolved in Aqua regia - Different Conſiſtences of the Solutions.

Tin diſſolved in Acid of Nitre.

Uſe of the preceding Solutions of Tin in precipitating the colouring Matter of Cochineal.

Woollen and Linen boiled in Cochineal precipitated by Tin - Reaſon of the different Dyes explained by Macquer.

Inflammable Air ſeparated from Tin during its Solution in Acid of Vitriol and Acid of Sea Salt.

Account of Marggraf's Experiments upon the Solubility of Tin in vegetable Acids native, and fermented.

Tin amalgamated with Quickſilver, and the Amalgam diſtilled with corroſive Sublimate - Liquor fumans Libavii - Butter of Tin - Revivified Mercury.

Looking Glaſs ſilvered by amalgamating Mercury and Tin.

Tin, Biſmuth, and Lead melted together, and mixed with Mercury - Method of ſilvering concave Glaſs Veſſels with the Mixture.

Of Silver.

Natural Hiſtory of Silver.

Account of the Method of ſeparating native Silver from the Stones or Earths in which it is imbedded, by Amalgamation with Mercury; as practiſed at Potoſi and other Spaniſh Silver Mines in America, and at Kungſburg in Norway.

Account of the Method of ſeparating Silver when mineraliſed with ſulphurated Lead, as practiſed in Flintſhire, and in Northumberland.

Cardiganſhire lead Ores aſſayed for Silver.

Silver purified from Semimetals, and imperfect Metals, by Cupellation with Lead.

Silver purified from ſuch minute Portions of Copper as eſcape Cupellation, by Fuſion with Nitre and Borax.

Silver ſeparated from $\frac{1}{3}$, or any leſs Part of its Weight of Gold by Solution in Acid of Nitre - Quartation or Departure.

Silver recovered from its Solution in Acid of Nitre by precipitation with Copper.

Solution of Silver in Acid of Nitre cryſtallized.

Cryſtals of Silver melted - Lunar Cauſtic.

Silver precipitated from Acid of Nitre, by Acid of Vitriol, or by any neutral Salt containing Acid of Vitriol.

Silver diſtilled to Dryneſs with Acid of Vitriol - Sulphureous Acid - Saline Reſiduum.

Saline Reſiduum diſſolved in Water, and cryſtallized.

Silver precipitated from Acid of Nitre, by Acid of Sea Salt, or by any neutral Salt containing it - Luna Cornea.

Marggraf's Method of obtaining Silver abſolutely pure by the Reduction of Luna Cornea.

Silver precipitated from its Solution in Acid of Nitre by fixed Alcali.

Precipitated Silver diſſolved in vegetable Acids, in volatile, and phlogiſticated fixed Alcalies, according to Marggraf's Method.

Pure Silver made harder by being melted with Copper in the Proportion of 37 to 3 - Standard Silver of England.

Silver precipitated from Acid of Nitre, largely diluted with Water, by means of Mercury - Arbor Dianæ.

Silver combined with Sulphur into an artificial Ore reſembling the Minera Argenti vitrea.

Of Gold.

Natural Hiſtory of Gold.

Method of ſeparating native Gold from Sands, Earths, &c. by Amalgamation with Quickſilver.

Method of extracting Gold when mineralized, or when ſo mixed with Sulphur by means of other Metals as to eſcape the Action of Quickſilver and Aqua regia.

Gold ſoluble in Aqua regia, but not in Acid of Nitre.

Silver ſoluble in Acid of Nitre, but not in Aqua regia.

Method of purifying Gold from all metallic Subſtances by Solution in Aqua regia, and Precipitation with green Vitriol.

Method of ſeparating a minute Portion of Gold from a large Quantity of Silver, by melting the Mixture with Sulphur, as practiſed at Rammelſberg.

Gold precipitated from its Solution in Aqua regia made with Acid of Nitre and Acid of Sea Salt, by volatile Alcali - Aurum fulminans.

Aurum fulminans deprived of its fulminative Power by Oil of Vitriol, by Fuſion with Sulphur, by fixed Alcali, and in part by Ablution with Water.

Gold precipitated from its Solution in

Aqua regia, when largely diluted with Water, by Plates of Tin, or by a Solution of Tin in the ſame Menſtruum - Purple Magiſtery of Caſſius.

Glaſs changed into an artificial Ruby by being melted with Caſſius' purple Magiſtery.

Gold extracted from its Solution in Aqua regia, and kept ſuſpended in Æther.

Method of ſeparating Gold from gilt Copper.

Gold precipitated from its Solution in Aqua regia by fixed Alcali.

Precipitated Gold diſſolved by the ſame Menſtruums as precipitated Silver.

Gold diſtilled to Dryneſs with the Acid of Vitriol, with the Acid of Sea Salt, and with the Acid of Nitre - Inſoluble in theſe Menſtruums.

Gold diſſolved in Hepar Sulphuris.

Pure Gold hardened by being melted with Copper, or with an Admixture of Copper and Silver, in the Proportion of 22 to 2 - Standard Gold of England.

Gold amalgamated with Mercury — Methods of gilding and ſeparating Gold from gilt Works.

Of MINERAL WATERS in general, and their various Impregnations.

Different Methods of aſſaying mineral Waters, and their Imperfections.

Of Thermæ or hot mineral Waters, and the different Conjectures concerning the Cauſe of their Heat.

Accounts of Dr. Brownrigg's Experiments on the fixed Air contained in Spa Water.

M. Lane's Experiments concerning the Suſpenſion of Iron in Water, by means of fixed Air diſcharged either from fermenting, or effervesſcing Mixtures.

Of Bituminous Subſtances.

Natural Hiſtory of Bituminous Subſtances.

Newcaſtle Coal diſtilled - Phlegm - Acid - Air - Oil - Caput mortuum.

Air diſcharged from Newcaſtle Coal by Diſtillation, collected, and ſhewn to be inflammable, and to retain its elaſticity and inflammability for ſeveral Days.

Peat from the Iſle of Ely diſtilled - Phlegm - Acid - Oil - Alcali - Caput mortuum.

Amber diſſolved in Spirits of Wine.

Amber precipitated from its Solution in Spirits of Wine by Water.

Amber diſtilled - Phelgm - Acid Spirit - Volatile acid Salt - Oil - Caput mortuum.

Method of rectifying Oil of Amber.

Method of purifying Salt of Amber.

Amber Varniſh made by different Methods.

OF VEGETABLES.

Of vegetable Juices ſpontaneouſly extravaſated, or exuding upon Inciſion.

Of liquid Reſins, or Balſams.

Venice Turpentine diſtilled without Addition with the Heat of boiling Water - Acidulated Phlegm - Colourleſs eſſential Oil, commonly called Æthereal Spirit of Turpentine - Reſinous Reſiduum.

The Reſiduum of the preceding Proceſs diſtilled with a Degree of Heat exceeding that of boiling Water - Acid - Yellow Oil - Reſiduum called Colophony.

Colophony diſtilled to Dryneſs - Acid - Reddiſh Oil, called by ſome, Balſam of Turpentine - Caput mortuum.

Common Turpentine diſtilled with Water - Eſſential Oil, vulgarly called Spirit of

Turpentine - Reſiduum - Terebinthina coɫta or common Roſin.

Turpentine diſſolved in Spirits of Wine, and precipitated therefrom by Water.

Of Tar and Pitch, and the Method of procuring them.

Tar diſſolved in Part in Water.

Of Lamp Black, and the Method of obtaining it.

Balſam of Capivi diſtilled Balneo Arenæ - Acid - Yellow Oil - Blue or green Oil - Caput mortuum.

Of Balſam of Gilead, Balſam of Peru, Balſam of Tolu, liquid Amber, &c.

Of ſolid Reſins.

Benzoine diſſolved in Spirits of Wine, and precipitated therefrom by Water - Virgins Milk.

Acid Phlegm and eſſential Salt, commonly called Flowers of Benzoine, obtained from Benzoine by Sublimation.

Eſſential Salt obtained from Benzoine by Elixation with Water and Cryſtallization.

Flowers of Benzoine diſſolved in Water, and in Spirits of Wine.

The Reſiduum from the Sublimation of the Flowers of Benzoine diſtilled - Acid - Oil of different Conſiſtences - Caput mortuum.

Elemi - Maſtic - Copal - Dragon's Blood, and other ſolid Reſins diſſolved in Spirits of Wine and Oils.

Different Kinds of Varniſhes made, and applied upon Wood and Metals.

Of Camphor.

Native Camphor.

Rough Camphor refined by Sublimation.

Rough Camphor refined by Solution in Spirits of Wine.

Camphorated Spirits of Wine inflamed.

Camphor diſſolved in Acid of Nitre, and in Acid of Vitriol.

Camphor ſeparated from Spirits of Wine, and from mineral Acids by the Addition of Water.

Of Gums.

Gum Arabic, Gum Tragacanth, Gums from Pear Trees, Plumb Trees, Apricot Trees, &c. diſſolved in Water - Mucilages.

Gums diſſolved in Water, and precipitated therefrom by Spirits of Wine.

Gums diſtinguiſhed from Reſins principally by their Solubility in Water, and Inſolubility in Spirits of Wine, and by their being neither fuſible, nor inflammable in Fire.

Gum Arabic diſtilled - Acid - Oil - Volatile Alcali - Caput mortuum.

Of Gummy Reſins.

Gum Ammoniac diſſolved in Spirits of Wine.

Gum Ammoniac diſſolved in Water.

Of Aſſa fœtida, Myrrh, Frankincenſe, and other gummy Reſins.

Of VEGETABLE JUICES obtained by Trituration, and Expreſſion.

Of eſſential Salts of Plants.

Native aqueous Juices expreſſed and clarified.

Native aqueous Juices evaporated and cryſtallized - Eſſential Salts.

Of neutral Salts contained in Vegetables.

Hiſtory of Sugar, and of the Method of preparing it.

Brown or gray Muſcovade - Melaſſes, or Treacle.

Method of refining Sugar.

Sugar diſſolved in Water and cryſtallized - Saccharum candum, et cryſtallinum.

Sugar diſſolved in rectified Spirits of Wine, and cryſtallized.

Refined Sugar diſtilled - Acid - Oil - Air - Caput mortuum.

Of ſaccharine Juices obtainable from Maple Trees, Birch Trees, Sycamore Trees, &c. by tapping; from Fruits and Roots of various Kinds, by Solution in Spirits of Wine; from the ſpontaneons Exudations of the Fraxinus rotundiore Folio, and other Trees producing Manna; and from various Flowers affording Honey to the Bee.

Native Juices of Vegetables inſpiſſated to different Conſiſtences - Liquid or ſolid Extracts by Expreſſion.

Of Aloes, Opium, Acacia vera, and other ſolid Extracts by Expreſſion.

Of expreſſed Oils.

Oils obtained by Expreſſion from Linſeed, Muſtard Seed, ripe Olives, Almonds, Walnuts, &c.

Expreſſed Oils diſtinguiſhed principally from eſſential Oils, in not being ſoluble in Spirits of Wine, nor volatile in the heat of boiling Water, and in having ſcarce either taſte or ſmell.

Method of impregnating expreſſed Oils with the odorous Principle of Violets, Lilies, Roſes, &c. - Various Perfumes.

Oil of Olives diſtilled - Phlegmatic Acid - Oil - fixed Oil - Caput mortuum.

Of the Rancidity of expreſſed Oils.

Expreſſed Oils ſuſpended in Water by means of Mucilages - Emulſions - Milky Juices of Plants.

Of the Combination of Oils with fixed Alcali.

Fixed Alcali deprived of its fixed Air by Quicklime - Cauſtic Alcali - Soap Leys.

Soap Leys inſpiſſated - Cauterium potentiale, lapis infernalis.

Oil of Olives, Oil of Turpentine, Train Oil, Tallow, &c. diſſolved in Soap Leys - Soaps of various Kinds.

Solution of Soap in diſtilled Water, and in Spirits of Wine.

Solution of Soap in Water decompounded by Acids, and by earthy, or metallic neutral Salts.

Method of analyzing Vegetables further explained, by Infuſion, and Decoction in various Menſtruums.

Carduus Benedictus infuſed in cold Water.

Carduus Benedictus boiled in Water.

Peruvian Bark infuſed in cold Water.

Peruvian Bark boiled in Water.

Jalap digeſted with Spirits of Wine - Tincture of Jalap - Reſiduum.

The Reſiduum of the preceding Proceſs boiled with Water and inſpiſſated - Aqueous Extract of Jalap.

Reſin of Jalap precipitated from Tincture of Jalap by Water.

Method of obtaining the reſinous and gummy Parts of Vegetables, and of making ſpirituous, aqueous, and mixt Extracts.

Aqueous Decoction of red Saunders.

Spirituous Decoction of red Saunders.

Aqueous Decoction of Brazil Wood.

Spirituous Decoction of Brazil Wood.

Aqueous Decoction of Alkanet Root.

Spirituous Decoction of Alkanet Root.

Red Saunders digeſted in Oil of Turpentine.

Alkanet Root digeſted in Oil of Turpentine.

Archel boiled in Water, in Oils, in Acids, in Spirits of Wine, in fixed Alcalies, and in volatile Alcalies.

The colouring Matter of ſome Vegetables

precipitated by Alum, Solutions of Tin, &c. - Lakes.

Various Experiments relative to the production, change, and recovery of Colours, by different ſaline Additions to coloured vegetable Infuſions.

Of Dying in general.

Method of analyzing Vegetables by Diſtillation, exemplified in various Inſtances, and various Degrees of Heat.

Mint, Thyme, Roſemary, Lavender, or other aromatic Plants diſtilled with a Heat leſs than that of boiling Water and without Addition - Spiritus rector, or odorous Principle.

The ſame Plants diſtilled with the Addition of Water, and with the heat of boiling

Water - Eſſential Oils - Aromatic or ſimple diſtilled Waters.

Of the different weights, colours, and conſiſtences, of eſſential Oils.

Eſſential Oils by Expreſſion from Oranges, Citrons, &c.

Method of obtaining them in Italy.

Eſſential Oils ſoluble in Spirits of Wine.

Roſemary Tops, Lavender Flowers, &c. diſtilled with Spirits of Wine - Spirit of Roſemary, Spirit of Lavender, &c. more commonly called Hungary Water, Lavender Water, &c.

Eſſential Oil of Roſemary, and of Lavender, precipitated from Hungary Water and Lavender Water, by the Affuſion of Water.

Of diſtilled ſpirituous Waters.

Roſemary, &c. after the Extraction of their eſſential Oil, diſtilled to Dryneſs - Phlegm - Acid - Empyreumatic Oil - Caput mortuum.

Method of making Charcoal explained.

Charcoal not acted upon by Water, Acids, Alcalies, vinous Spirits, or Oils.

Charcoal decompoſed by burning - Phlogiſton - Reſiduum.

Quantity of Reſiduum from a given Weight of Charcoal eſtimated.

Fixed alcaline Salt and Earth obtained from the Reſiduum.

Of the Method of manufacturing and depurating Pot-aſh.

Of the difference between the mineral fixed Alcali, or Natron of the Antients, and the vegetable fixed Alcali.

Analyſis of Woods.

Oak diſtilled B. M. - Phlegm - Reſiduum.

Reſiduum diſtilled - Phlegm - Acid - Air - Oil lighter and heavier than the Acid - Caput mortuum.

Air from Oak not deſtructive of Flame, but inflammable after paſſing through Water,

ter, and through fixed alcaline Lixivia, and retaining its inflammability for ſeveral Days.

Of the different quantities of Charcoal, of liquid Contents, and of fixed Air obtained from equal Weights of Oak, Box, Hazel, Willow, and other Woods by Diſtillation.

Of the beſt kinds of Charcoal requiſite for the making of Gunpowder, fluxing of Metals, &c.

Volatile Alcali diſengaged from the Acid of Oak by fixed Alcali.

Acid of Box-wood rectified.

Rectified Acid of Box ſaturated with vegetable and mineral fixed Alcalies - Nature of neutral Salts from the diſtilled Acids of Vegetables.

Analyſis of the Tetradynamia of Linnæus.

Muſtard Seed, Pepper Wort, &c. diſtilled with the heat of boiling Water - Phlegm ſapid and odorous, but neither manifeſtly acid nor alcaline.

Muſtard Seed, &c. diſtilled with a degree of Heat ſuperior to that of boiling Water - Volatile Alcali, Acid, Air, Oil, Caput mortuum.

Of Soot.

Wood Soot diſtilled - Acid - Volatile Alcali - Empyreumatic Oil - Sal Ammoniac - Caput mortuum, yielding fixed Alcali.

Of Wax.

Wax diſtilled - Acid - Oil - Congealed Oil - Caput mortuum.

Congealed Oil or Butter of Wax rectified - Acid - Yellow Oil - Fat brown Reſiduum.

Methods of bleaching yellow Wax, and of colouring bleached Wax.

OF FERMENTATION in general.

Of the vinous Fermentation.

Hiſtory and Uſe of Malting as preparatory to the Fermentation of farinaceous Seeds.

Equal Weights of Barley, Rye, Wheat, Oats, Beans, Peaſe, converted into Malt, and after Decoction for the ſame time in equal Quantities of Water expoſed to Fermentation - Ale of different Sorts.

The medium heat of fermenting Wort eſtimated by the Thermometer, and ſhewn to be equal to the medium heat of an Animal Body.

The Air generated during the vinous Fermentation ſhewn to be deleterious to Animal Life and to Flame.

The ſpecific gravity of Air generated by vinous Fermentation proved by the Hon. Henry Cavendiſh to be greater than that of common Air, and to be equal to that ſeparable from Marble by Solution, or about 511 Times lighter than Water, when common Air is ſuppoſed 800 Times lighter.

Equal Weights of Raiſins, refined Sugar, brown Sugar, Treacle mixed with equal Quantities of Water and fermented - Wines of different Kinds.

Ale diſtilled - Malt Spirits - Reſiduum.

Wine diſtilled - Brandy - Reſiduum.

Potatoes fermented and diſtilled - Potatoe Brandy.

Of the Methods of making Malt Spirits, Brandies, Rums, Arracks, and the Origin of their different Odours and Flavours explained.

Malt Spirits, Brandy, &c. diſtilled - Alcohol, or rectified Spirits of Wine - Acidulated Phlegm.

Of the Identity of Alcohol from whatever fermented Liquor it is diſtilled.

Of proof Spirit.

Uſual Methods of eſtimating the Strength of Brandies, Rums, &c. and their Imperfections.

Alcohol and Water mixed together, the Bulk of the Mixture ſhewn to be conſiderably leſs than the Sum of the ſeparate Bulks.

Method of judging accurately concerning the Strength of ſpirituous Liquors pointed out.

Of the Arrack or Coſmos prepared by the Calmuck Tartars from Mares Milk.

Method of obtaining white and red Tartar.

Tartar purified - Cream or Cryſtals of Tartar.

Tartar diſtilled - Acid - Air - Oil - Volatile Alcali - Caput mortuum.

Fixed alcaline Salt extracted from the Caput mortuum of diſtilled Tartar without burning it.

Cryſtals of Tartar combined with abſorbent Earths.

Cryſtals of Tartar combined with the fixed Alcali of Tartar - Sal vegetabilis, Tartarus tartariſatus.

Cryſtals of Tartar combined with the fixed Alcali - Sal Polychreſtus de Saignette - Rochelle Salt.

Cryſtals of Tartar combined with volatile Alcali.

Of the acetous Fermentation, or the ſpontaneous Converſion of Ales and Wines into Alegars and Vinegars.

Method of making Vinegars, and of diſcovering whether they are adulterated with Oil of Vitriol.

Vinegar diſtilled - Phlegm - Acid - Extract.

Method of diſcovering whether Vinegar be depraved by Lead.

Extract of Vinegar diſtilled - Acid - Empyreumatic Oil - Volatile alcaline Salt, and Spirit - Caput mortuum.

Vinegar concentrated by freezing the phlegmatic Part.

Diſtilled Vinegar combined with abſorbent Earth.

Diſtilled Vinegar combined with the fixed Alcali of Tartar - Sal Diureticus - Terra foliata Tartari.

Diſtilled Vinegar combined with the mineral fixed Alcali, and cryſtallized.

Diſtilled Vinegar combined with volatile Alcali - Spiritus Mindereri - Acetous Sal Ammoniac.

Combinations of the Acid of Tartar with the vegetable and fixed Alcalies, decompoſed by the Acid of Vinegar.

Difference between the Acid of Tartar, and that of Vinegar.

Of the putrefactive Fermentation of Vegetables.

OF ANIMALS.

General Analyſis of animal Fluids exemplified in the Analyſis of Milk, Blood, Urine, and Whites of Eggs.

Of Milk.

Cows Milk diſtilled Balneo Mariæ - Phlegm tranſparent, colourleſs, inſipid - Unctuous ſaline Reſiduum.

Aſſes Milk diſtilled Balneo Mariæ - Phlegm - Reſiduum.

Proportion of Phlegm ſeparable from equal Weights of Cows Milk and Aſſes Milk by Diſtillation B. M. aſcertained.

Equal Weights of Cows Milk, Goats Milk, Woman's Milk, Aſſes Milk evaporated to Dryneſs - Proportion of the Reſiduums, and of the ſaline and earthy Matter contained in them.

Reſiduum from the Diſtillation of Milk. B. M. diſtilled - Acid - Empyreumatic Oil - Volatile Alcali - Caput mortuum, containing fixed Alcali.

Milk ſpontaneouſly ſeparated into Cream and Skim-Milk.

Cream reſolved into Butter - Curd - Whey.

Skim-Milk reſolved into Whey - Curd - Butter.

Butter diſtilled - Acid - Oil - Caput mortuum.

Curd diſtilled - Alcali volatile in a fluid and concrete Form - Fetid Oil - Caput mortuum.

Whey evaporated and cryſtallized - Sugar of Milk - Sea Salt.

Milk not coagulable by the Heat of boiling Water.

Milk coagulable by Acids, by Alcalies, by vinous Spirits, by ſome neutral Salts earthy and metallic.

Of Blood.

Blood examined by a Microſcope - Tranſparent Fluid - Red Globules of various Sizes.

Blood warm from the Vein diſtilled Balneo Mariæ - colourleſs, inſipid Phlegm - Reſiduum.

Of the Quantity of Phlegm contained in the Blood of different Animals, and ſeparable therefrom by the Heat of boiling Water.

Phlegm, impregnated with volatile Alcali, obtained from Blood by the Heat of a boiling fixed alcaline Lixivium.

Blood exſiccated by the Heat of the Sun.

Blood exſiccated by the Heat of the Sun, or by Diſtillation B. M. not ſubject to Putrefaction.

Exſiccated Blood diſtilled - Volatile alcaline Spirit and Salt - Air - Empyreumatic Oil - Caput mortuum.

Blood ſpontaneouſly reſolved, by Expoſure to the Air, into a fluid and coagulated Part - Serum - Craſſamentum.

Account of Mr. Hewſon's Experiments, relative to the Cauſe of the ſpontaneous Coagulation of Blood when taken out of an animal Body.

Blood prevented from ſpontaneous Coagulation by Sea Salt, and other neutral Salts.

The Craſſamentum reſolved, by Ablution, into a white fibrous Part, called by ſome the coagulable Lymph, not ſoluble in Water, and a red colouring Part, called the red Globules, reckoned ſoluble in Water.

The fibrous Part or coagulable Lymph diſtilled.

The red globular Part diſtilled.

The Serum coagulated by boiling Water, by Acids, and by vinous Spirits.

Of Urine.

Freſh Urine gives no Marks of containing either acid or alcaline Salts.

Freſh Human Urine diſtilled B. M. - Colourleſs Phlegm with an urinous Smell - Reſiduum.

Reſiduum diſtilled - Volatile Alcali in a fluid and concrete Form - Oil - Sal Ammoniac - Caput mortuum, yielding Sea Salt by Elixation, and fixed Alcali by Calnation.

Horſes Urine diſtilled - Phlegm - Volatile alcaline Spirit - Oil - Caput mortuum, yielding fixed Alcali without Calcination, and Sea Salt by Elixation.

Human Urine evaporated and cryſtallized - Fuſible, eſſential, native, microcoſmic, phoſphoric Salt of Urine - Sal Ammoniac - Sea Salt.

Horſes Urine, evaporated to a due Conſiſtency, does not yield a fuſible Salt, but a portion of Sea Salt and a Magma incapable of Cryſtallization.

Earth from the Exſiccation of human Urine rendered white by Calcination - Its habitude to Fire and Menſtruums examined.

Account of Marggraf's Experiments on the fuſible Salt of Urine.

Volatile Alcali ſeparated from freſh Urine by fixed Alcali and by Lime.

Of Eggs.

Whites of Eggs coagulated nearly by the ſame degree of Heat which coagulates the Serum of Blood.

Whites of Eggs coagulable by Acids and by Spirits of Wine - their Uſe in Clarification.

Whites of Eggs diſtilled B. M. Phlegm - Reſiduum.

Reſiduum diſtilled - Volatile Alcali concrete and fluid - Empyreumatic Oil - Caput mortuum.

Oil expreſſed from the Yolks of Eggs.

Of the eſſential Oil, volatile Acid, and expreſſed Oil of Ants.

Of Coral, &c.

Volatile Alcali procured from Coral and Spunges by Diſtillation.

Of Brains and Spermaceti.

Contents of a human Cranium diſtilled - Phlegm - Volatile Alcali - Fetid Oil - Caput mortuum.

Of Fat.

Suet diſtilled - Acid - Congealed Oil - Caput mortuum.

Of Bones and Horns.

Horns rendered ſoft and flexible by boiling in Water.

Ox Horn, Tortoiſe Shell, &c. diſſolved in Acid of Nitre.

Bones ſoftened, and in part diſſolved, by Digeſtion in Acids.

Earth of Bones precipitated from Acids by Alcalies.

Gelatinous and ſaline Part extracted from Hartſhorn by boiling in Water - Method of making Glue - Portable Soop - Iſinglaſs - Size, &c.

Inert Earth remaining after the Extraction of Gelly of Hartſhorn - Cornu Cervi philoſophice Calcinatum.

Hartſhorn diſtilled - Phlegm - Volatile alcaline Salt and Spirit - Air - Empyreumatic Oil - Caput mortuum.

Method of preparing volatile alcaline Salt and Spirit from Bullocks Bones, &c.

Animal Oil diſſolved in Spirits of Wine.

Animal Oil rectified, Oleum Animale Dippelii.

Hiſtory of Putrefaction.

Cauſtic volatile Alcali rendered mild by the Air diſcharged from putreſcent Bodies.

Volatile Alcali ſeparated with the Heat of boiling Water from putrid Blood, Pigeons Dung, and putrid Urine.

Hiſtory of Kunckel's Phoſphorus.

Phoſphorus made by diſtilling evaporated Urine.

Phoſphorus made by diſtilling the Extract of Urine with Plumbum corneum and Charcoal, according to Marggraf's Method.

Phoſphorus made by diſtilling fuſible Salt of Urine and Charcoal together.

Method of rectifying Phoſphorus.

Several Experiments with Phoſphorus.

Of other Vegetables which yield a Phoſphorus by Diſtillation.

Analyſis of the Fæces Alvinæ.

The following Tables of Salts were drawn up and printed ſome years ago; I intended to have made large Additions to them, and to have accompanied them with a Copper-plate, exhibiting the different Figures of all the cryſtallizable Salts hitherto known. I would not however ſuppreſs them in their preſent State, thinking that they might not be unſerviceable to a Student in Chemiſtry.

Tabula Salium in genere.

Sales ſunt	Acidi	Minerales	Vitriolicus, Nitroſus, Marinus vel Muriaticus.		Sal acidus ſuccini
		Vegetabiles	Nativi vel eſſentiales, Acetoſus, Tartareus, Empyreumatici vel ſtillatitii.	fermentati,	Sal acidus Benzöes, &c.
		Animales	Phoſphoricus, Ex formicis, &c. diſtillatione educti.		
	Alcalini	Fixi	Mineralis, ſive Natron. Vegetabilis, ſive lixivioſus.		
		Volatiles — Igne vel Putrefactione a ſubſtantiis Animalibus, Vegetabilibus, et Foſſilibus quam plurimis, ſeparati.			
	Neutri	Ab Acido quovis conjuncto cum Baſi	Alcalina, Terrea, Metallica.		

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Tabula Salium neutrorum, Dati Alcalinis.

Acidum	conjunctum cum Alcali	efficit Salem Neutrum, quem vocant
Vitriolicum	Minerali	Salem mirabilem Glauberi.
	Vegetabili	Tartarum vitriolatum, nitrum vitriolatum, Salem de duobus, &c.
	Volatili	Salem ammoniacum ſecretum Glauberi.
Nitroſum	Minerali	Nitrum cubicum.
	Vegetabili	Nitrum commune.
	Volatili	Nitrum flammans vel Ammoniacum.
Marinum	Minerali	Salem communem regeneratum, foſſilem, fontanum.
	Vegetabili	Salem febrifugum vel digeſtivum Sylvii.
	Volatili	Salem Ammoniacum vulgarem.
Acetoſum	Minerali	Salem cryſtalliſantem, nomine non dotatum.
	Vegetabili	Salem diureticum, et improprie Tartarum regeneratum, Terram foliatam Tartar.
	Volatili	Spiritum Mindereri.
Tartareum	Minerali	Salem Repulenſem, Rochelle Salt, Sel de Seignette.
	Vegetabili	Tartarum ſolubilem, Tartarum tartariſatum, Salem vegetabilem.
	Volatili	Tartarum ſolubilem Ammoniacum.
Vegetabilum Acida Nativa, et Stillatitia vel Empyreumatica	Minerali Vegetabili Volatili	Sales cryſtalliſantes varios, nominibus non inſignitos, Chemicis haud penitus exploratos.
Phoſphoricum	Minerali Vegetabili	Sales figuræ variæ, igne borracis inſtar liqueſcentes, non crepitantes.
	Volatili	Salem microcoſmicum, nativum vel fuſibilem Urinæ.
Formicarum	Minerali Vegetabili Volatili	Salem aëre deliqueſcentem. Salem diſtillatione non concreſcentem.

Tabula Salium neutrorum, Baſi Terreâ.

Acidum	conjunctum cum terra	efficit Salem Neutrum nuncupatum
Vitriolicum	Calcarea	Selinitem, Phoſphorum Bononienſem, Gypſum.
	Argillacea	Alumen.
	Vitreſcenti, ab Alcali dejecta	Alumen forſan.
	Magneſiæ	Salem catharticum amarum, vulgo Epſom Salts.
	Aluminis	Alumen regeneratum.
Nitroſum	Calcarea	Nitrum calcareum, Phoſphorum Balduini.
	Argillacea	Alumen nitroſum.
	Vitreſcenti, ab Alcali dejecta	
	Magneſiæ	Salem flavum cryſtalliſantem nitro ſimilem, ſed in aëre deliqueſcentem.
	Aluminis	Maſſam ſalinam Alumine magis ſtipticam in igne fortiori acidum prorſus dimittentem.
Marinum	Calcarea	Salem improprie dictum Ammoniacum fixum, oleum Calcis, Phoſphorum Hombergi.
	Argillacea	Alumen marinum.
	Vitreſcenti, ab Alcali dejecta	
	Magneſiæ	Maſſam deliqueſcentem, vix cryſtalliſationem admittentem.
	Aluminis	Maſſam Salinam.
Acetoſum	Calcarea	Salem cryſtalliſantem, aëre non deliqueſcentem.
	Argillacea	Alumen acetoſum.
	Vitreſcenti, ab Alcali dejecta	
	Magneſiæ	Maſſam viſcoſam, dum calida manet, ſed brevi deliqueſcentem.
	Aluminis	
Tartareum	Calcarea	Salem ſolubilem cryſtalliſantem.

Tabula Salium neutrorum, Baſi Metallicâ, quorum uſus in Artibus et Medicinâ eſt præcipuus.

Acidum	conjunctum cum Subſ. Metall.	efficit Salem Neutrum nuncupatum
Vitriolicum	Ferro	Vitriolum, vel Cuperoſum viride.
	Cupro	Vitriolum, vel Cuperoſum cœruleum.
	Zinco	Vitriolum album, Goſlarienſe.
	Mercurio	Turpethum minerale.
Nitroſum	Argento	Cryſtallos lunares, ex quibus Lapis dictus infernalis conficitur.
	Cupro	Maſſam vel Cryſtallos, in Spiritu vini ſolubiles.
	Plumbo	Cryſtallos plumbi, figuræ pyramidalis.
	Mercurio	Cryſtallos Mercurii, unde calx Mercurii, Mercurius præcipitatus ruber, Arcan. Corall.
	Biſmutho	Magiſterium Biſmuthi.
Marinum	Argento	Lunam corneam.
	Cupro	Maſſam vel Cryſtallos, in Spiritu vini ſolubiles.
	Ferro	Maſſam unde tinctura Martis in ſpiritu ſalis conficitur.
	Plumbo	Plumbum corneum.
	Stanno	Butyrum Stanni, et liquorem fumantem Libavii.
	Mercurio	Sublimatum corroſivum, Præcipitatum Album, Sublimatum dulce, Panaceam Mercurialem.
	Regulo Antim.	Butyrum Antimonii.
Acetoſum	Plumbo	Ceruſam et Saccharum Saturni.
	Cupro	Viride æris et viride æris diſtillatum.
	Ferro	Tincturas martiales acetoſas.
Tartareum	Ferro	Rotulas Martiales, Tartarum Chalybeatum.
	Regulo Antim.	Tartarum emeticum.

GEOFFROY's TABLE

1	2	3	4	5	6	7	8
Acids in General	Acid of Sea Salt	Acid of Nitre	Acid of Vitriol	Abſorbent Earths	Fixed Alcaline Salts	Volatile Alcaline Salts	Metalline Subſtances
Fixed Alcaline Salts	Tin	Iron	Phlogiſton	Acid of Vitriol	Acid of Vitriol	Acid of Vitriol	Acid of Sea Salt
Volatile Alcaline Salts	Regulus of Antimony	Copper	Fixed Alcaline Salts	Acid of Nitre	Acid of Nitre	Acid of Nitre	Acid of Vitriol
Abſorbent Earths	Copper	Lead	Volatile Alcaline Salts	Acid of Sea Salt	Acid of Sea Salt	Acid of Sea Salt	Acid of Nitre
Metalline Subſtances	Silver	Mercury	Abſorbent Earths		Diſtilled Vinegar		Diſtilled Vinegar
	Mercury	Silver	Iron		Sulphur		
			Copper				
			Silver				
	Gold						

of AFFINITIES.

9	10	11	12	13	14	15	16
Sulphur	Mercury	Lead	Copper	Silver	Iron	Regulus of Antimony	Water
Fixed Alcaline Salts	Gold	Silver	Mercury	Lead	Regulus of Antimony	Iron	Spirits of Wine
Iron	Silver	Copper	Calamine	Copper	Silver, Copper, Lead	Silver, Copper, Lead	Neutral Salts
Copper	Lead						
Lead	Copper						
Silver	Zinc						
Regulus of Antimony	Regulus of Antimony						
Mercury							
Gold							

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